

REMARKS

The Office Action of February 27, 2007 has been reviewed and these remarks are responsive thereto. Claims 38, 44, 50, 52, 55, 64-67, and 69-71 have been amended and claims 43, 62, and 63 have been cancelled. New claims 73-75 have been added. No new matter has been added. Upon entry of this amendment, claims 38-42, 44-61, and 64-75 will remain pending in this application. Reconsideration and allowance of the instant application are respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 38-72 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,612,217 to Shockey, et al. (“Shockey”) in view of U.S. Patent No. 6,502,788 to Noda, et al (“Noda”), U.S. Patent No. 5,970,843 to Strasser, et al. (“Strasser”), U.S. Patent No. 2,889,752 to Meyer (“Meyer”), U.S. Design Patent No. 343,824 to Halwes (“Halwes”), and U.S. Patent No. 6,073,884 to Lavergne “Lavergne”). Applicants respectfully traverse these rejections.

Independent Claim 38

Amended claim 38 recites, among other features,

a modular structure comprising: a frame formed from a plurality of frame portions; and a shell formed from a plurality of abutting armored panels and the shell forming at least a portion of an interior and exterior surface of the modular structure; each of the frame portions being secured to at least one of the armored panels to form discrete units, the units being joinable to form the modular structure having a first configuration, and the units being separable to disassemble the modular structure, wherein the units are interchangeable with units from other modular structures having at least a second configuration, wherein the first configuration is different from the second configuration.

Applicants respectfully assert that none of the cited references, alone or in combination, teaches or suggests the features of claim 38.

The Office Action cites Shockey in combination with Noda, Strasser, Meyer, Halwes and Lavergne in rejecting this claim. Applicants respectfully assert that none of the cited references teach or suggest the features of claim 38. Shockey is directed to a ballistic barrier for protecting an aircraft from damage due to projectile penetration. Abstract. Shockey describes a ballistic barrier comprised of one or more layers of high-strength fabric positioned in the fuselage wall between the outer metal skin and the interior panels. Col. 2, lines 37-40. Shockey fails to teach or suggest a shell formed from a plurality of abutting panels, the shell forming at least a portion of an interior *and* an exterior surface of the modular structure, as recited in claim 38. In fact, Shockey teaches away from this feature because the ballistic barrier of Shockey is positioned in the fuselage wall *between* the outer metal skin and the interior panels. The arrangement of Shockey would not allow for a shell that forms a portion of both an interior and exterior surface.

Even if it could be argued that Shockey teaches a shell forming a portion of an interior and exterior surface, Shockey fails to teach or suggest a modular structure having discrete units, the units being joinable to form the modular structure having a first configuration, and the units being separable to disassemble the modular structure, wherein the units are interchangeable with units from other modular structures having at least a second configuration, wherein the first configuration is different from the second configuration. Shockey describes a ballistic barrier comprised of layers of fabric. The barrier is comprised of woven fibers forming fabric that is used in layers to protect various components of an aircraft. Col. 2, line 51-col. 3, line 25. Although the ballistic barrier of Shockey may be used with an aircraft or other vehicle, Shockey fails to teach or suggest *a modular structure* formed of discrete units. Further, Shockey fails to teach or suggest the discrete units being separable to disassemble the modular structure and units that are interchangeable with units from other modular structures. Shockey fails to teach or even suggest any sort of disassembly or interchangeability.

The addition of Noda fails to cure the deficiencies of Shockey with respect to claim 38. Noda describes a panel of composite material including two outside skin parts, a plurality of stringers, connecting members for connecting the plurality of stringers, and a reinforcing member. Abstract. Noda describes a panel that can be used in the manufacture of parts, such as

an aircraft wing. Noda fails to teach or suggest a shell that forms at least a portion of an interior and an exterior surface. Noda also fails to teach or suggest a modular structure formed of discrete units being separable to disassemble the modular structure. The composite panels of Noda do not constitute modular structures formed of discrete units that are separable. In fact, there is no teaching or suggestion in Noda of any separability of the panels.

The further addition of Strasser fails to cure the deficiencies of Shockey and Noda with respect to claim 38. Strasser describes an integrated, layered armor structure having multiple layers which alternate in their characteristics. Abstract. Strasser fails to teach or suggest a shell forming an interior and exterior portion of a surface of a modular structure. In fact, Strasser fails to teach or suggest any modular structure at all.

The addition of Meyer fails to cure the deficiencies of Shockey, Noda, and Strasser with respect to claim 38. Meyer describes a latch type aircraft gun mount. There is no teaching or suggestion in Meyer of any type of modular structure.

The further addition of Halwes fails to cure the deficiencies of Shockey, Noda, Strasser and Meyer with respect to claim 38. Halwes describes the ornamental design for an external hoist for a helicopter. Halwes fails to teach or suggest a modular structure having the features recited in claim 38.

The addition of Lavergne fails to cure the deficiencies of Shockey, Noda, Strasser, Meyer and Halwes with respect to claim 38. Lavergne describes an armor-plated seat for a helicopter. The armor plated seat of Lavergne does not constitute a modular structure. Further, Lavergne fails to teach or suggest a shell forming a portion of an interior and exterior surface of a modular structure.

Accordingly, Applicants respectfully assert that claim 38 is patentably distinct from the cited combination of references and request withdrawal of this rejection.

Claims 39-51 and 75 depend from claim 38 and are allowable for at least the same reasons as recited above and further in view of the novel features recited therein. Applicants respectfully request withdrawal of these rejections.

Independent Claim 52

Amended claim 52 recites, among other features,

a modular structure, comprising: a frame formed from a plurality of *tubular* frame portions, wherein the tubular frame portions are discrete and separable; and a shell formed from a plurality of abutting armored panels, wherein the frame and shell form an elongate shape with a first end area and an opposite second end area, wherein *the shell forms at least a portion of an interior surface of the modular structure and an exterior surface of the modular structure*, each of the frame portions being secured to at least one of the armored panels to form discrete units, the units being joinable to form the modular structure and including at least a portion having a curved configuration, and the units being separable to disassemble the modular structure, at least one of the units having a hinged configuration to form an entry point of the modular structure, the entry point forming an opening in the modular structure that encompasses substantially all of the first end area. (Emphasis added)

Applicants respectfully assert that none of the cited references, alone or in combination, teach or suggest the features of claim 52.

None of Shockley, Noda, Strasser, Meyer, Halwes and Lavergne, alone or in combination, teaches or suggests the features of claim 52. As discussed above with respect to claim 38, none of the cited references teaches or suggests a shell that forms at least a portion of an interior surface of the modular structure and an exterior surface of the modular structure. Further, none of the cited references, alone or in combination, teaches or suggests a frame formed from a plurality of tubular frame portions, wherein the tubular frame portions are discrete and separable. Accordingly, Applicants respectfully assert that claim 52, as well as claims 53-61 that depend therefrom, are allowable over the cited references.

Independent Claim 62

Independent claim 62, as well as claim 63 that depends therefrom, have been cancelled without prejudice or disclaimer, thereby rendering this rejection moot. Claims 64-71 that were dependent from claim 62 have been amended to depend from new claim 74.

Independent Claim 72

Independent claim 72 recites, among other features,

a modular structure, comprising a base; at least three armored sides, connected to the base and substantially perpendicular to the base, wherein the at least three armored sides form at least a portion of both the interior surface and exterior surface; an open end including a means for coupling, wherein the means for coupling mates with a corresponding portion of a means for coupling on a second modular structure; and wherein the base, the at least three armored sides and the open end form a self-supporting structure.

Applicants respectfully assert that none of the cited references, alone or in combination, teaches or suggests the features of claim 72.

The Office Action fails to identify any portion of any of the references that teaches or suggests all the features of claim 72. For instance, the Office Action fails to identify any portion of any of the references that teaches or suggests at least three armored sides forming at least a portion of *both* an interior surface and an exterior surface of the modular structure. As discussed above, none of Shockey, Noda, Strasser, Meyer, Halwes and Lavergne, alone or in combination, teaches or suggests at least three armored sides forming at least a portion of *both* the interior surface and the exterior surface of a modular structure. Accordingly, Applicants respectfully assert that claim 72 is allowable over the cited references.

In addition, claim 73, which depends from claim 72, is allowable for the same reasons as discussed above and further in view of the novel features recited therein. Claim 73 recites, among other features, the modular structure of claim 71, wherein one of the at least three sides is removable during use of the modular structure. None of the cited references teaches or suggests such an arrangement. In fact, the references teach away from such a feature since it is unlikely that an airplane would have one of its sides removable during use. Accordingly, Applicants assert that claim 73 is allowable.

Impermissible Hindsight

The Action improperly combines the Shockey, Noda, Strasser, Meyer, Halwes and Lavergne references. Namely, the Office Action states that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings in order to obtain a workable aircraft.” *See* the Office Action at p. 4.

The Office Action provides no support for such an alleged motivation. In fact, the Office Action identifies no apparent reason to combine the elements in the fashion claimed by the patent at issue. The Office asserts that in formulating a rejection under 35 U.S.C. 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed. The Office Action thus fails to establish a *prima facie* rejection, and the Examiner instead reaches his conclusion after having benefited from reading Applicant’s own disclosure. The combination of Shockey, Noda, Strasser, Meyer, Halwes and Lavergne is thus, impermissible hindsight.

The Federal Circuit has repeatedly stated that the limitations of a claim in a pending application cannot be used as a blueprint to piece together prior art in hindsight, *In re Dembiczak*, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999), and that the Patent Office should *rigourously* apply the requirement that a teaching or motivation to combine prior art references needs to be provided. *Id.* (emphasis added). Thus, Applicants respectfully submit that that there is no motivation or suggestion to combine Shockey with Noda, Strasser, Meyer, Halwes and Lavergne. Even assuming that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, as is often argued by the Office, the Office Action provides no evidence that the combination takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, nor does the Office Action provide any evidence that the combination does not include knowledge gleaned only from Applicant’s disclosure, as would be required to support such a finding. Thus, the combination is improper based on hindsight reasoning, and the rejection is traversed.

New Claims

New claim 74 recites, among other features,

a modular structure comprising: a first frame formed from a plurality of frame portions; a first shell formed from a plurality of armored panels; the first frame and first shell forming a first modular section having a bottom surface, a top surface and at least three sides and forming a first elongate structure, wherein the shell forms at least a portion of the interior surface and exterior surface of the first modular section; first coupling means arranged on the first modular section and configured for joining the first modular section with at least one other modular section; a second frame formed from a plurality of frame portions; a second shell formed from a plurality of armored panels; the second frame and second shell forming a second modular section having a bottom surface, a top surface and at least three sides and forming a second elongate structure, wherein the shell forms at least a portion of the interior and exterior surface of the second modular section; and second coupling means arranged on the second modular section and configured for joining the second modular section to at least the first modular section; wherein the first modular section is substantially perpendicular to the second modular section when joined.

None of the cited references, alone or in combination, teaches or suggests a modular structure having a first and second modular section wherein the first modular section is substantially perpendicular to the second modular section when joined. Accordingly, Applicants respectfully assert that new claim 74 is allowable.

Claims 64-71 have been amended to depend from claim 74 and are allowable for at least the same reasons as cited above and further in view of the novel features recited therein. New claim 75 depends from claim 38 and is allowable for at least the same reasons as its base claim and further in view of the novel features recited therein. For instance, none of the cited references, alone or in combination, teaches or suggests a frame extending around the exterior surface of the modular structure. Accordingly, Applicants respectfully request withdrawal of these rejections.

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Reply to Office Action of February 27, 2007

CONCLUSION

It is believed that no fee is required for this submission. If any fees are required or if an overpayment is made, the Commissioner is authorized to debit or credit our Deposit Account No. 19-0733, accordingly.

All rejections having been addressed, applicants respectfully submit that the instant application is in condition for allowance, and respectfully solicit prompt notification of the same.

Respectfully submitted,

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